

## **REMARKS**

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 1-20 were pending. By the present response, claims 1, 6 and 19 have been amended and claims 21 and 22 have been added. Thus, upon entry of the present response, claims 1-22 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims, the figures, and the specification, paragraphs [0019], [0028], [0038], and [0061].

## ***EXAMINER INTERVIEW***

Applicants appreciate the opportunity extended by the Examiner to have a telephone interview on October 19, 2004. During the interview, the presently presented amended claim 1 and new claims 20 and 21 were discussed. In the interview, it was agreed that the claims as proposed appeared to distinguish over the presently cited references. This response is submitted in keeping with the discussion in the Examiner Interview.

## ***CLAIM REJECTIONS UNDER 35 U.S.C. §103***

Claims 1-9, 11, 12 and 15-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO 98/098212 to Berlin et al. (hereafter "*Berlin '212*") in view of WO 97/22536 to Berlin et al. (hereafter "*Berlin '536*"), and U.S. Patent No.

4,051,277 to Wilkinson et al. (hereafter "*Wilkinson et al.*") on the grounds set forth in paragraph 2 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Claim 1, the only independent claim at issue here, recites that a method of producing a laminated packaging material for liquid food packaging comprises a core layer of paper or paperboard and a gas barrier layer applied on one side of the core layer. A liquid barrier composition including a dispersion or solution of a polymer is applied as the barrier layer on at least a first side of a carrier layer and is dried during heating for driving off liquid at a first drying temperature in a first step. A second side of the carrier layer is combined and permanently united with one side of the core layer in a second step, whereafter the dried barrier layer is cured by heating to above a second temperature being higher than the first temperature, in a third step.

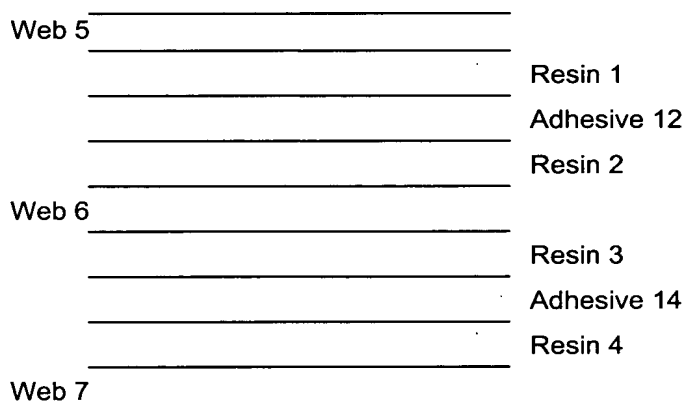
The proposed combination of references does not result in a structure having the order of layers and features as produced by the method in claim 1. Thus, a prima facie case of obviousness has not been established because all of the features of the claim are not taught or suggested. See, M.P.E.P. §§2143-2143.03.

The following observations on the cited references are offered in support of the above conclusion.

*Berlin '812* discloses a packaging laminate for packages for liquid foods. The disclosed packaging laminate is produced in one production line (Figs. 3a-3b). As shown in the figures, a carrier layer 11 is transported past successive application and drying stations 31-36. The packaging laminate is shown in cross section in figures 1 and 2. Here, it is seen that the carrier layer (layer 11 in fig. 3a) is an outermost layer (see Figs. 1 and 2). Further, the barrier layer 22 is bonded to the

core 23 by adhesive 24. Therefore and in contrast to claim 1, the carrier layer 11 is not bonded to the core 23 and the barrier layer 22 is applied toward the core layer 23.

*Berlin '536* discloses a barrier layer 14 directly applied to a carrier layer 11 that is the paper core. *Wilkinson et al.* discloses applying resin (1, 2, 3, 4 in Fig. 1) and adhesive (12 and 14 in Fig. 1) between successive paperboard webs (5, 6 and 7 in Fig. 1) to form a paperboard container material with the following hypothetical structure based on the production line in Fig. 1:



Neither *Berlin '536* nor *Wilkinson et al.* alone or in combination contribute to overcoming the difference between claim 1 and the disclosure in *Berlin '812*. For example, the combination of disclosures in *Berlin '812* and *Berlin '536* and *Wilkinson et al.* results in a method and structure in which a) the carrier layer is separated from the core (*Berlin '812*), b) the carrier layer is the core layer (*Berlin '536*), and c) no carrier layer (e.g., web 5 and 7) is bonded to a core e.g., web (6), but rather the resin is bonded to the core. In other words, the proposed combination does not result in a method as claimed, including bonding the second side of the carrier layer 11 (e.g.,

the side without the barrier layer) to the core 16. Accordingly, obviousness has not been established because not all the elements are disclosed, taught or suggested in the proposed combination. Withdrawal of the rejection is respectfully requested.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Berlin '212*, *Berlin '536* and *Wilkinson et al.* as applied to claim 8 above, and further in view of EP 0590263 A2 to Kotani et al. (hereafter "*Kotani et al.*") on the grounds set forth in paragraph 3 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Claim 10 depends indirectly from claim 1. However, the disclosure in *Kotani et al.* does not contribute to overcome the above noted differences between the disclosures in *Berlin '212*, *Berlin '536* and *Wilkinson et al.* and independent claim 1. Therefore, claim 10 distinguishes over the cited references for the same reasons. Withdrawal of the rejection is respectfully requested.

Claims 13 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,499,820 to Desaulniers (hereafter "*Desaulniers*") in view of *Berlin et al. '812*, *Berlin et al. '536*, and *Wilkinson et al.* on the grounds set forth in paragraph 4 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Claims 13 and 14 depend directly from claim 1. However, the disclosure in *Desaulniers* does not contribute to overcome the above noted differences between the disclosures in *Berlin '212*, *Berlin '536* and *Wilkinson et al.* and independent claim

1. Therefore, claims 13 and 14 distinguish over the cited references for the same reasons. Withdrawal of the rejection is respectfully requested.

### **NEW CLAIMS**

New claims 21 and 22 have been added. Independent claim 21 recites a method of producing a laminated packaging material for liquid food packaging comprising a core layer of paper or paperboard and a gas barrier layer applied on one side of the core layer. The method comprises the following steps in order:

- applying a liquid barrier composition including a dispersion or solution of a polymer as a barrier layer on at least one side of a carrier layer, wherein applying occurs in a barrier layer and carrier layer production line;

- driving off liquid from said barrier layer by heating to a first temperature to produce a dried barrier layer on the carrier layer, wherein driving off liquid occurs in the barrier layer and carrier layer production line;

- winding the dried barrier layer on the carrier layer on a roll;

- unwinding the roll and introducing said dried barrier layer on the carrier layer into a lamination processing line;

- combining and permanently uniting the dried barrier layer on the carrier layer with one side of a core layer by extrusion of a layer of thermoplastics therebetween, wherein combining and permanently uniting occurs in the lamination processing line;

- curing the dried barrier layer to form an intermediate web by heating to above a second temperature, wherein the second temperature is greater than the first temperature and curing occurs in the lamination processing line; and

- applying a first outer layer to a first side of the intermediate web and applying a second outer layer to a second side of the intermediate web, therein both the first layer and the second layer are thermoplastics and the first layer and the second layer are applied by extrusion.

None of the presently cited references disclose, either alone or in combination, the features of new claim 21. For example, the combination of *Berlin* '812 and *Berlin* '536 and *Wilkinson et al.* does not disclose, teach or suggest a separate "barrier layer and carrier layer production line" and a "lamination processing

line." The separation of such production features is advantageous in the present application for at least some of the following reasons: it contributes to avoiding moisture absorption into the core layer with consequential cracking on drying (paragraph [0016]), it utilizes less heat and energy in the production process (paragraph [0018]), it allows the use of heat sensitive barrier layers that would otherwise suffer under a one-production line method or would require changing the method (paragraph [0019]) and two temperatures can be used, one for drying and one for curing.

### **CONCLUSION**

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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